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Portuguese diagnostic reference levels national survey

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Purpose: National survey was carried out in Portugal in order to establish national Diagnostic Reference Levels (DRL's) per for specific radiography and CT examinations involving all the societies and the government agency responsible for radiation issues.

Methods and Materials: Exposure parameters and dose values for the most frequent radiography and CT consider the most commune procedure type or clinical information. Data from 10 standard patients per procedure was collected on the participating centres and submitted on the website "NRD Portugal". Equipment brand, technology and quality control details were also obtained.

Results: The majority of the centres revealed that equipment quality control was performed by the manufacture (51%). Data from 1590 standard patients submitted to radiography and CT was analysed. DRL's for specific indications were defined for radiography: chest routine, pelvic arthrosis, standing abdominal, lumbar spine without osteosynthesis material; and for CT: head for trauma, head for stroke, chest routine, high resolution chest, abdomen for liver metastases and trunk. Significant differences were founded for head CT trauma and stroke dose values. However no differences were founded in chest CT dose values for routine and high resolution CT.

Conclusion: This was the first Portuguese national survey promoted that considers clinical information on the most frequent radiography and CT examinations. As expected CT technology can contribute to high dose reduction. The majority of Portuguese DRL's are according to the literature.